

EXHIBIT C

AFFIDAVIT OF CYNTHIA McCORMICK

STATE OF MARYLAND)
 : ss
COUNTY OF MONTGOMERY)

Cynthia McCormick, being duly sworn, deposes and says:

1. From 1991 to 2002, I served with the United States Food and Drug Administration (“FDA”), initially as a Medical Review Officer and later as the Director of the Division of Anesthetics, Critical Care, and Addiction Drug Products (“DACCADP”). In both of these capacities, I was involved in FDA’s process of reviewing and ultimately approving Neurontin for several indications or uses. This Affidavit accurately reflects my actions and conclusions with respect to my involvement with the review and approval of Neurontin.

I. PROFESSIONAL BACKGROUND

2. I received my A.B. in Chemistry from Bryn Mawr College in 1972 and my M.D. from the Medical College of Pennsylvania in 1976. After medical school, I completed a Residency in Pediatrics and Communicable Diseases at the University of Michigan Medical Center, and from 1979 to 1980, I completed a Fellowship in Pediatric Neurology at the University of Michigan Medical Center. From 1980 to 1982, I completed a Neurology Residency at the University of Pennsylvania, Children’s Hospital of Philadelphia.

3. From 1982 to 1987, I practiced pediatric neurology in Duluth, Minnesota, where I also served as Associate Clinical Professor of Neurology, University of Minnesota – Duluth. In 1985 and 1986, I served as Chair of the Department of Neurology at St. Mary’s Medical Center in Duluth, Minnesota.

4. I joined the National Institutes of Health (“NIH”) as a Medical Officer in 1987, working in the Epilepsy Branch of the National Institute of Neurological Convulsive and Developmental

Disorders and Stroke ("NINCDS"). One of our branch's primary goals was the development of new anticonvulsants. It had been years since an anticonvulsant had been approved, and the anticonvulsants that were then available had many drawbacks. Due to the lack of new anticonvulsants, the NIH led a coordinated effort aimed at developing new anticonvulsants. As a Medical Officer with the NIH, I had responsibility for overseeing the administration of grants for the development of new anticonvulsants as well as other neurological disorders. I also served as medical monitor for a number of clinical trials for new anti-epileptic drugs in development.

5. In 1991, I joined the FDA as a Medical Officer in the Neurology section of the Division of Neuropharmacological Drug Products ("DNPD"). It was in this capacity that I was involved in the initial review and approval of Neurontin as adjunctive therapy in the treatment of partial seizures in adults. I served in that role until 1997 when I was promoted to Director of the DACCADP. As the Division Director, I was involved in the review and approval of Neurontin for the management of postherpetic neuralgia in adults.

6. In October 2002, I left the FDA to become the Deputy Director of the National Institute of Neurological Disorders and Stroke ("NINDS") Division of Extramural Research, where my work focused on promotion in research stroke and neurological disorders. I served as the Deputy Director until 2004 when I left the NIH. Since 2004, I have served as a private regulatory consultant.

7. I have been board-certified by the American Board of Pediatrics and board eligible by the American Board of Neurology and Psychiatry with special competence in child neurology. Since 1976, I have maintained my medical licensure in one or more states.

8. As a licensed physician, I have treated patients suffering from a multitude of disorders and have experience in prescribing medicines for both approved and unapproved uses.

Prescribing medicines for “off-label” purposes is a common and beneficial practice of medicine, and it is important that physicians use their own experience and best medical judgment in treating patients.

II. DUTIES AT THE FDA

9. As a Medical Officer in DNDP, my duties included reviewing Investigation New Drug (“IND”) Exemptions, New Drug Applications (“NDAs”), and other submissions by sponsors seeking approval to study and/or market a compound for certain uses or indications.

10. My duties as the Director of the DACCADP included supervision and oversight of the review team throughout the drug development process and the rendering of approval decisions based on safety and efficacy data in NDAs and Supplemental New Drug Applications submitted by sponsors seeking to market compounds for specific uses or indications.

III. NEURONTIN ADJUNCTIVE EPILEPSY THERAPY REVIEW AND APPROVAL

11. Beginning in January 1992, I served as the clinical reviewer for an NDA submitted by Parke-Davis Pharmaceuticals for approval of Neurontin as a safe and effective adjunctive therapy in the treatment of partial seizures in adults. My responsibilities as the clinical reviewer included reviewing and analyzing the safety and efficacy data contained in the NDA and all supplemental materials, preparing reports summarizing the safety and efficacy data, presenting data to the Peripheral Central Nervous System Advisory Committee in December 1992, and as a member of the review team, reviewing and revising the proposed Neurontin labeling.

12. As the clinical reviewer, I wrote several reviews summarizing the safety and efficacy data of Neurontin. My initial clinical review evaluated the data reported in the initial NDA and first two safety update reports. In this review, which contains 119 pages of text and reflected hundreds of hours of analysis by me, I concluded that the benefits of using Neurontin as

adjunctive therapy for the treatment of partial and secondary generalized seizures outweigh the potential risks. Accordingly, I concluded that the medication is safe and effective and should be approved. See Combined Medical Statistical Review (“Review”) (Attached Exhibit A).

13. In preparing my initial clinical review, I thoroughly evaluated all adverse events to identify any potential risks. Among the potential risks I discussed in my clinical review were adverse event reports of depression and suicidality. In evaluating these adverse events, I identified all reports of depression and suicidal behavior and separately listed the number of reports considered serious or that led to withdrawal. See Review at 109, 114. In addition, I also noted in my Review the number of patients reporting depression as an adverse event who had no prior history of depression and also the number of patients who required treatment for their depression. Review at 114.

14. Whereas I emphasized in my Review the potential risk of depression and suicidality, I never concluded that the clinical trial data affirmatively established or supported the conclusion Neurontin increases the risk of or causes depression or suicidal behavior. Had I reached such a conclusion, I would have emphasized this conclusion in one of the several reports I prepared during the epilepsy NDA review process and would have made a strong appeal that the drug should not be approved. Furthermore, such a concern also would have been prominently noted in a warning in the final approved labeling.

15. Evaluating adverse events of depression and suicidal behavior reported by patients with epilepsy requires an understanding that such patients are far more likely to experience depression and suicidality than the general population. I noted this in my Review of the Fourth Safety Update. Review of Safety Update #4 (December 28, 1993) (Attached Exhibit B). In this review, which was completed several months after my initial report, I noted “There is a higher incidence

of depression among epileptics with partial seizures as compared to the general population.” Review of Safety Update #4 at 8. Given the high background rate of depression and suicidal behavior in patients with epilepsy, that there were cases of depression with suicidal ideation and cases of suicide attempt reported for all epilepsy studies did not suggest to me a causal association between Neurontin and suicidal behavior.

16. The clinical trials I evaluated in the course of the NDA review did not involve any reports of completed suicide committed by a patient while on Neurontin. Although there was one report involving a patient who committed suicide six months after last ingesting Neurontin, there was no immediate temporal relationship between the suicide and Neurontin. This suicide was reported by Parke Davis to the FDA in the First Safety Update and considered by me and my colleagues during the NDA review process. In addition, I discussed this event at the Advisory Committee meeting held in December 1992. As the patient’s suicide occurred several months after the patient discontinued treatment, the event was appropriately considered unrelated to the study medication.

17. Furthermore, a single case of suicide in a database of over 2,000 patients would not in and of itself have established a causal association with the medication. As explained above, the rate of suicide in patients with partial epilepsy is significantly higher than the rate in the general population, and thus, it is not inconsistent with background rates to have a patient with epilepsy commit suicide.

18. The absence of any suicides in the clinical trials database is not due to the exclusion of patients with pre-existing psychiatric disorders from the clinical trials. Indeed, the clinical trials included such patients. On page 114 of my Review, I wrote that of the 78 patients who reported depression as an adverse event, 19 had no prior history of depression. See Review at 114.

Implied in this statement is that 58 patients who reported depression as an adverse event did report a prior history of depression. Accordingly, patients with depression were included in the clinical trials and were evaluated by the FDA before Neurontin had been approved.

19. On page 109 of my Review, I noted that some patients with mild or no depression on recruitment who required treatment with antidepressant drugs while on treatment with gabapentin “appear to have fallen through the cracks.” Review at 109. I made these comments in reference to several reports of depression not being listed as serious adverse events despite the patients having undergone treatment with other medications. I further elaborated on this matter at an advisory committee meeting held on December 15, 1992. Speaking to the Peripheral Central Nervous System Advisory Committee, I explained that “numerous examples were found on a spot check among case report forms where patients developed treatment-emergent depression, pharmacological intervention was required, and a report of a serious adverse event was not made. Indeed, it wasn’t required.” See Transcript of PCNS Advisory Committee, December 15, 1992, page 59 (Attached Exhibit J). Accordingly, the statements reflected on page 109 of my Clinical Review and those presented to the PCNS Advisory Committee were a commentary on the regulations and were not a reflection of Parke-Davis’ reporting practices.

20. The PCNS Advisory Committee is a group of outside experts that gives independent professional and technical advice to the FDA. The Advisory Committee met in December 1992 to assess the safety and effectiveness of Neurontin for use as adjunctive therapy in patients with epilepsy. At the meeting, I presented an overview of my Clinical Review. Included in this overview was a discussion of various adverse events reported in the clinical trials, including episodes of depression and suicidal behavior. In presenting the data, I never suggested that Neurontin causes or increases the risk of depression or suicidal behavior. Had I believed that

Neurontin did cause or increase the risk of depression or suicidal behavior, I would certainly have discussed the matter and advised the committee of this belief.

21. As part of my ongoing review of the Neurontin adjunctive epilepsy NDA, I reviewed Safety Updates submitted periodically by the sponsor. Safety updates are, as the name implies, updates of safety data from ongoing human exposure from clinical trials or named patient treatment that a sponsor is required to submit between the time of an initial NDA submission and the time of approval. In my review of the Fourth (and final) Safety Update, I made this written observation: "There is a higher incidence of depression among epileptics with partial seizures as compared to the general population. One cannot determine based on the available data, largely uncontrolled, whether the reports here represent an increase in incidence or intensity of depression compared to that which is expected." Review of Safety Update #4 at 8. These statements are consistent with my belief that although there had been adverse event reports of depression in the clinical trials, these reports were not surprising in light of the background rates of depression in patients with epilepsy.

22. In addition to the Clinical Reviews I prepared, Neurontin's safety and efficacy data were also thoroughly evaluated and summarized by other officials in the Division of Neuropharmacological Drug Products, including the Division's Deputy Director, Dr. Russell Katz. His report, dated October 11, 1993, contains multiple references to the data on depression and suicidal behavior. The report also notes (page 3) that there had been one suicide "after having been off drug for a considerable time." See Dr. Russell Katz, "Supervisory Overview of Safety and Efficacy Data for NDA 20-235" at 13-15 (October 11, 1993) (Attached Exhibit C). Consistent with my findings, Dr. Katz never concluded or stated that there was an increased risk

or causal association with Neurontin and suicidal behavior. He likewise recommended approval of the Neurontin NDA.

23. Dr. Paul Leber, the Director of the Neuropharmacological Division, also carefully evaluated the Neurontin NDA and prepared a report concerning the medication's safety and effectiveness. His report, titled "Approval Action Memorandum," issued findings consistent with those noted in Dr. Katz's report and my clinical reviews. See Dr. Paul Leber, Approval Action Memorandum (December 13, 1993) (Attached Exhibit D).

24. Based on my recommendations and those of Drs. Leber and Katz, the FDA approved Neurontin on December 30, 1993, for adjunctive therapy in the treatment of partial seizures in patients over 12 years of age with epilepsy.

IV. FDA'S REVIEW AND APPROVAL OF THE NEURONTIN LABELING

25. In connection with the FDA's review of an NDA, the FDA is substantially involved in developing and approving the physician package insert (commonly called the label). Throughout this process the FDA carefully reviews all of the proposed labels submitted by the sponsor, closely edits each draft, and often requests significant revisions. The FDA is the final arbiter regarding the label and is authorized to withhold approval until the FDA's required changes have been made.

26. The FDA's involvement in developing and approving the Neurontin label was no different. Before approval, the FDA reviewed each and every word of the Neurontin proposed labeling and made many revisions, thereby ensuring that the final approved labeling accurately reflected the preclinical data and clinical-trial data. Throughout the approval process, I recall Parke-Davis being responsive to all of the FDA's requested recommended labeling changes.

27. When the FDA ultimately approved Neurontin on December 30, 1993, it did so on the condition that “[t]he final printed labeling (FPL) must be identical to the draft labeling/PPI” that the FDA had reviewed, edited, and approved. FDA Approval Letter (December 30, 1993) (Attached Exhibit E).

28. The final approved labeling appropriately identified the data on depression and suicide-related events in the Adverse Reactions section. The data on depression is contained in a table that lists treatment-emergent events that occurred in at least 1% of patients in the placebo-controlled add-on trials and were numerically more common in the Neurontin group. As reflected in the table, 1.8% of Neurontin patients reported treatment-emergent depression compared to 1.1% of placebo patients. The slight difference between the Neurontin group and placebo group is not statistically or clinically meaningful, and thus, does not establish an association with depression.

29. Given the relatively low frequency of suicidal adverse events reported in the clinical trials and the high background rate of suicidal behavior in patients with epilepsy, the FDA did not believe it would have been appropriate to address suicidal behavior in the warnings, precautions, or contraindications sections. Accordingly, the FDA’s scientific judgment in December 1993 was that there was no reasonable evidence of an association with Neurontin and suicidal behavior or any psychiatric adverse event. To include a warning or other prominent listing of suicide-related events would have been inconsistent with the clinical trial data and a mischaracterization of the risks associated with Neurontin. In addition, such a warning would have had significant potential to impact public health adversely; both by diluting scientifically supported information in the labeling and by improperly discouraging the use of Neurontin.

30. Because the rate of clinical-trial suicide-related events did not exceed the expected rate, the data regarding suicidality events was appropriately listed in the “Other Adverse Events Observed During All Clinical Trials” subsection. This section of the label included all reported events except those already listed in the table comparing drug and placebo data, those too general to be informative, and those not plausibly associated with the use of the drug. Importantly, the events listed in the Other Adverse Events subsection were included without regard to causation, and thus, the mere listing of an event in no way suggests a causal association with the study medication.

31. Adverse events involving reports of suicidal behavior were listed in the Other Adverse Events’ Nervous System subsection. This subsection identified suicidal as an infrequent event (event occurring in 1/100 and 1/1000 patients) and suicide gesture as a rare event (event occurring in fewer than 1/1000 patients). The terms suicidal and suicide gesture were taken from the sponsor’s modified COSTART dictionary and were approved by the FDA for use in the Neurontin label. Both terms accurately reflected the adverse events involving suicidal behavior observed during the clinical trials. Any additional discussion relating to suicidal behavior in other sections of the labeling would have conflicted with the FDA’s decision on the final printed labeling.

32. In addition to suicidal and suicide gesture, the Neurontin label’s Nervous System subsection lists many other psychobiologic adverse events. These events are listed despite psychobiologic adverse events having been more common in patients on placebo than patients on Neurontin in the controlled trials. That the Neurontin label lists psychobiologic events that were more common in placebo than Neurontin further illustrates how events were included regardless of causation.

V. APPROVAL FOR TREATMENT OF POSTHERPETIC NEURALGIA

33. As previously noted, in 1997 the FDA appointed me Director of the DACCADP (since renamed the Division of Analgesics, Anti-inflammatory and Rheumatology Products). As the Division head, I was responsible for providing scientific and regulatory oversight for numerous investigational and marketed analgesic products, including medications for the treatment of neuropathic pain.

34. As Director, I had supervisory responsibility of a supplemental NDA submitted by Pfizer Inc. for an indication for the management of postherpetic neuralgia. Pfizer had initially sought an indication for the management of neuropathic pain based on prior discussions with individuals in the Division of Anti-inflammatory, Analgesics, and Ophthalmologic Drug Products, who until July 2000 were responsible for reviewing many applications for pain. This Division had indicated to the sponsor that an indication for the management of neuropathic pain was a viable indication if there were two positive trials in one neuropathic pain model and a single positive trial in a second neuropathic pain model. In May 2001, however, my division, the DACCADP, which at that time was given responsibility for products for neuropathic pain, advised Pfizer that a general neuropathic pain indication was not yet recognized by the FDA. In addition, we advised Pfizer that replicated evidence of efficacy in one neuropathic pain condition would only gain an indication for relief of pain in that particular pain condition. Based on the guidance communicated from my division, Pfizer agreed to amend its application to postherpetic neuralgia specifically. To date, no medication has been approved in the United States for a general neuropathic pain indication.

35. In reviewing the sNDA submitted for the indication of PHN, my division thoroughly evaluated the safety data reported in the sponsor's Integrated Summary of Safety and

supplemental materials. An in-depth clinical review was completed by Dr. Sharon Hertz, a Medical Officer in DACCADP, who concluded that Neurontin was safe for use in patients with postherpetic neuralgia (see Dr. Sharon Hertz, "Review and Evaluation of Clinical Data (May 24, 2002) (Attached Exhibit F)). Dr. Hertz's findings are consistent with the conclusions reached by Dr. Bob Rappaport, the Deputy Director and also team leader in the Division.

36. Among the adverse events evaluated by Dr. Hertz were reports of depression, which she found were more frequent among patients on placebo than patients on Neurontin. Dr. Hertz reflected this in Table 7.20 of her report, which shows that 2.2 percent of placebo patients in the neuropathy studies reported treatment-emergent depression compared to only 1.3 percent of patients on Neurontin. The adjacent columns list the depression data reported in the epilepsy add-on studies. A combined analysis of both the epilepsy add-on and neuropathy controlled studies shows that 1.7 percent of patients on placebo reported treatment-emergent depression compared to 1.5 percent of Neurontin patients. Although the 1.7 percent and 1.5 percent figures are not statistically significant, the fact that depression was more commonly reported in patients on placebo reinforces the lack of any causal association between Neurontin and depression.

37. Dr. Hertz's report also evaluated adverse events involving suicidal behavior. Her review identified only one intentional overdose, which the sponsor reported as a suicide attempt. The narrative indicates that the patient ingested 4500 mg of Neurontin and developed somnolence. A dose of 4500 mg of Neurontin may have been higher than the prescribed dose for this patient, but it would not be expected to result in fatality or even serious consequences in an adult. In evaluating this case, Dr. Hertz attributed only the somnolence as being related to Neurontin.

38. Consistent with Dr. Hertz's and Dr. Rappaport's findings, I concluded in my report that there was sufficient safety and efficacy data of Neurontin to treat postherpetic neuralgia. See

Review and Basis for Approval Action (May 22, 2002) (Attached Exhibit G). It is important to note that my report contains no discussion about Neurontin and psychiatric adverse events or suicidality. Considering the high background rates of depression in patients with epilepsy and chronic pain together with the overall controlled-trial data revealing higher numbers of depression in placebo patients, there clearly was no need to discuss depression as a potential risk.

39. In addition, as of May 2002, I had reviewed a number of NDAs since completing my review of the initial Neurontin NDA in 1993. I also was very familiar with Neurontin's exposure and safety data. Based on my extensive experience in reviewing NDAs and knowledge of Neurontin, I felt that Neurontin's benefits outweighed its relatively low risks. This is illustrated by the relatively few side effects associated with the medication, absence of metabolites, the lack of any significant drug-to-drug interaction issues, and relatively safe adverse-event profile. In addition, Neurontin had in 2002 been in use throughout the world for nearly a decade and had not given rise to a safety signal involving any psychiatric adverse event or suicidality. Accordingly, I did not feel it necessary in May 2002 to "set the record straight" as there was no record needing to be set straight. Therefore, I noted in my report that "Combined with the finding of safety in the epilepsy development program, which included exposure and safety data of several years' duration, there was adequate safety exposure to support the finding of safety in postherpetic neuralgia" Review and Basis for Approval Action at 3 (May 22, 2002).

40. In addition to the Division's clinical reviews, a pharmacology review was conducted by Dr. Timothy McGovern, the Division's Pharmacologist. Timothy McGovern, FDA Pharmacology Review of NDA 21-397 (May 21, 2002). Included in Dr. McGovern's and the FDA's pharmacology evaluation was a review of the "Clinical Pharmacology: Mechanism of Action" section of the proposed labeling. Pfizer's proposed label contained new language in the

Mechanism of Action section regarding monoamines and GABA. Specifically, Pfizer sought approval of language stating that “Gabapentin reduces the stimulated release of noradrenaline, dopamine, and glutamate under certain laboratory conditions. Gabapentin administration to humans increases the total brain content of GABA after a single dose. However, the relevance of these findings to clinical use is not yet clear.”

41. The FDA deleted this language by lining through both sentences in a series of edits made on May 16, 2002. See HFD-120 Labeling Version #2, dated May 16, 2002 (Attached Exhibit H). The deletion of the language regarding monoamines and GABA is supported by the conclusion that this information had little importance to a clinician and his prescribing decisions. Had the FDA believed these sentences were important to prescribers or to safety and efficacy, the Agency would not have removed them.

42. The FDA approved Neurontin for the treatment of postherpetic neuralgia on May 24, 2002. See FDA Approval letter (May 24, 2002) (Attached Exhibit I).

43. As before, when the FDA approved Neurontin for the treatment of postherpetic neuralgia, it did so on the condition that “The final printed labeling (FPL) must be identical to the draft labeling/PPI” that the Agency had reviewed, edited, and approved. Except in limited circumstances set forth in FDA regulations, any deviation from the final printed labeling by Pfizer would have constituted unlawful misbranding.

44. The final printed labeling contained data on psychiatric-related events seen in the neuropathic pain clinical trials. For example, in the Adverse Reactions’ “Other Adverse Events” subsection relating to the neuropathic pain trials, depression was listed as a frequent adverse event. Other events such as anxiety, depersonalization, and emotional lability were identified as infrequent events. Because depression occurred more often in patients on placebo than in

patients on Neurontin, the data on depression was appropriately not listed in Table 2, "Treatment-Emergent Adverse Event Incidence in Controlled Trials in Postherpetic Neuralgia (Events in at least 1% of Neurontin-Treated Patients and Numerically More Frequent Than in the Placebo Group)." As with the adverse events listed in the epilepsy section, the inclusion of adverse events observed in the neuropathic pain trials in no way suggests that Neurontin caused any of these events.

45. I believed then and continue to believe now that the final printed labeling approved by the FDA in May 2002 appropriately and accurately identified the data on psychiatric-related events reported in the neuropathic pain clinical trials.

46. Throughout my career at the FDA, I never concluded that Neurontin increases the risk of or causes depression or suicidal behavior. This remains my belief today.

Cynthia M^cCormick MD
Cynthia McCormick

Subscribed and sworn to before me, a notary public, this 13th day of September, 2007.

Vivienne E. Cooper
Notary Public

My Commission expires _____

